## **ENVIRONMENTAL CHEMISTS**

Date of Report: December 24, 1996 Date Received: December 19, 1996

Project: 7238, Metro Self Monitor, PO# M55593 Date Samples Extracted: December 20, 1996 Date Extracts Analyzed: December 20, 1996

# RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, ZINC USING METHOD 6010

# Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M55593	0.31	0.24	0.30	< 0.05
Method Blank	< 0.05	< 0.05	< 0.05	< 0.05

## **ENVIRONMENTAL CHEMISTS**

Date of Report: December 24, 1996 Date Received: December 19, 1996

Project: 7238, Metro Self Monitor, PO# M55593

# QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 74642 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.31	0.28	10	0-20
Copper Nickel	mg/L (ppm) mg/L (ppm)	0.24 0.30	$0.22 \\ 0.28$	$\begin{smallmatrix}9\\7\end{smallmatrix}$	0-20 0-20
Zinc	mg/L (ppm)	< 0.05	. <0.05	nm .	0-20

Laboratory Code: (Matrix Spike)

		The part of the Arms			Relative		
	Reporting	Spike	Sample	% R	ecovery	Acceptance	Percent
Analyte:	Units	Level	Result	MS	MSD	Criteria	Difference
Chromium	mg/L (ppm)	5	0.31	92	90	80-120	2
Copper	mg/L (ppm)	5	0.24	96	93	80-120	3
Nickel	mg/L (ppm)	10	0.30	90	89	80-120	1
Zinc	mg/L (ppm)	5	< 0.05	91	90	80-120	1

Laboratory Code: Spike Blank

	Reporting	Spike	% F	Recovery	Acceptance	Relative Percent
Analyte:	Units	Level	MS	MSD	Criteria	Difference
		Y JAMES				
Chromium	mg/L (ppm)	5	96	96	80-120	0
Copper	mg/L (ppm)	5	99	100	80-120	1
Nickel	mg/L (ppm)	10	95	96	80-120	1
Zinc	mg/L (ppm)	5	94	95	80-120	1

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

# SAMPLE CHAIN OF CUSTODY

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#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Beth M. Albertson, M.S. Bradley T. Benson Kelley D. Wilt 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044

December 24, 1996

## INVOICE # 96ACU1224-1 DUPLICATE COPY

Accounts Payable Alaskan Copper Works 628 South Hanford Seattle, WA 98134

RE: Project 7238, Metro Self Monitor, PO# M55593: Results of testing requested by Gerry Thompson, Project Manager for material submitted on December 19, 1996.

## **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Beth M. Albertson, M.S. Bradley T. Benson Kelley D. Wilt 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044

December 24, 1996

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on December 19, 1996 from your 7238, Metro Self Monitor, PO# M55593 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson Chemist

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Enclosures ACU1224R.DOC